Ms. Debbie Tolliver
Lehigh Portland Cement Company
P.O. Box 97
Mitchell, IN 47446

Dear Ms. Tolliver:

Re: Exempt Construction and Operation Status,
093-12881-00002

The application from Lehigh Portland Cement Company, received on October 22, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following upgrades to controls for kilns #1 and #2, to be located at 121 North First Street, Mitchell, Indiana, is classified as exempt from air pollution permit requirements.

Modifications to the gas-cleaning control systems for both Kiln #1 and #2 as follows:

(a) All gas-handling equipment between the kiln exhaust and ESP will be replaced, which includes:

(1) a 5-foot section of the kiln discharge;
(2) kiln feed end housing and dust settling chamber;
(3) breeching ducts;
(4) dedusting multi-clones; and
(5) ESP inlet cone.

(b) The internals on the ESP and T/R sets will be replaced; and

(c) The following new equipment will be installed:

(1) new 5-foot section on the discharge of the kiln;
(2) new kiln feed end housing;
(3) new kiln feed end seal;
(4) new high efficiency dedusting cyclone;
(5) new water spray tower; and
(6) new ESP inlet nozzle.

(d) The kiln ID fans will be modified / replaced with fans providing a higher static pressure and a lower volumetric flow. A higher static pressure fan is required for the additional pressure differential associated with the water spray tower. The system's volumetric flow requirement will be reduced due to the reduced amount of air infiltration from the new system. If the existing fan would be used the fan would be operated in the peak of the fan curve which could lead to operational problems or the fan searching for an operational point.

This existing source has submitted their Part 70 application (T 093-5990-00002) on May 31, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

nls

cc: File - Lawrence County
Lawrence County Health Department
Air Compliance - Joe Foyst
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak
Part 70 Application File - T-093-5990-00002

(AR-18J)

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue
Post Office Box 6015
Indianapolis, Indiana 46206-6015

Dear Mr. Dubenetzky:

This letter is in response to your December 11, 2000, prevention of significant deterioration (PSD) applicability determination request for Lehigh Portland Cement Company in Mitchell, Indiana. Lehigh proposes to upgrade their existing electrostatic precipitators and associated particulate matter control devices on existing kilns #1 and #2. Your letter states that these upgrades are being performed to comply with the requirements of 40 CFR Part 63, subpart LLL, will not affect the kilns' design capacity or increase efficiency of the kilns, and will not result in any collateral increases in emissions from these units. These pollution control devices do not generate their own emissions. In addition, your staff has indicated that these modifications will not affect the utilization rates at these units. The United States Environmental Protection Agency (USEPA) agrees that these upgrades to pollution control equipment would not trigger a PSD determination.

We will continue to work with you and your staff to assure that the appropriate PSD determination is applied to this and other sources. If you have any questions, contact Sam Portanova, of my staff, at (312) 886-3189.

Sincerely yours,

Pamela Blakley, Chief
Permits and Grants Section (IL/IN/OH)

standard bcc's: official file copy w/attachment(s)
originator's file copy w/attachment(s)
originating organization reading file w/attachment(s)

other bcc's: P. Blakley (via e-mail)
P. Reddy (via e-mail)
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Pamela Blakely, Chief
Permits and Grants Section (IL/IN/OH)
U.S. Environmental Protection Agency
AR-18J
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Re: Request for PSD applicability determination for modifications proposed by Lehigh Portland Cement Company

Dear Ms. Blakely:

The purpose of this letter is to inform the U.S. EPA of the OAM's preliminary findings regarding the cement kiln control device modifications proposed in the pending application from Lehigh Portland Cement Company. Lehigh proposes to upgrade the existing electrostatic precipitators (ESP) and associated PM control device on each of the existing kilns #1 and #2. The proposed upgrades are necessary for the kilns to comply with the requirements of the Portland Cement MACT, 40 CFR 63, Subpart LLL. The OAM believes that these upgrades are not subject to the Prevention of Significant Deterioration (PSD) rules because the upgrades will not effect the kiln design capacity or increase the efficiency of the kilns. Additionally, the upgrades are expected to result in a decrease in particulate matter emissions. No other pollutant emissions are expected to result from the proposed upgrades to the kiln's control devices. Our analysis is included in this letter and we are soliciting your opinion of this finding prior to issuing a determination to Lehigh. Lehigh has specifically requested that IDEM obtain written confirmation from U.S. EPA that the proposed upgrades are exempt from the requirements of PSD.

Lehigh is an existing major source under the PSD program and is located at 121 North First Street, Mitchell, Lawrence County, Indiana. Lehigh's kilns #1 and #2 were constructed in 1959 and have not been modified since then; therefore they are currently not subject to the requirements of the New Source Performance Standard (NSPS) for Portland Cement Plants, 40 CFR 60, Subpart F, and they have never been reviewed pursuant to the requirements of PSD. They are currently subject to a 40% opacity limit pursuant to 326 IAC 5-1 (Opacity). The Portland Cement MACT requires that these kilns comply with a 20% opacity limit, a particulate matter emission limit of 0.3 pound per ton of dry feed, and a dioxin/furan limit as stated in 40 CFR 63, Subpart LLL by June 14, 2002. In order for Kilns #1 and #2 to comply with the MACT PM and opacity limits, upgrades to the existing electrostatic precipitator (ESP) and the associated PM control device for each kiln will be required. In order to meet the MACT emission limits for dioxin/furan for Kilns #1 and #2, a water spray tower system must be installed prior to the ESP of each kiln which will enable the kiln exhaust temperature prior to the ESP to be maintained at or below 400 degrees Fahrenheit. The projected cost to make these modifications for each kiln's gas-cleaning control system is five million dollars.

The existing kiln exhaust gas-cleaning controls on each of Kilns #1 and #2 consist of a dust settling chamber, a breeching duct, a set of multi-clones and an ESP. Please refer to figure 1. The current dedusting equipment consisting of the dust settling chamber, the breeching duct and a multi-clone removes a percentage of dust from the kiln exit gas before the gas stream enters the ESP for final gas-cleaning. These pre-cleaning devices are critical for the overall dust collection efficiency of the entire gas-cleaning control system.

Lehigh proposes to modify the gas-cleaning control systems for both Kiln #1 and #2 as follows:

(a) All gas-handling equipment between the kiln exhaust and ESP will be replaced, which includes:

(1) a 5-foot section of the kiln discharge;
(2) kiln feed end housing and dust settling chamber;
(3) breeching ducts;
(4) dedusting multi-clones; and
(5) ESP inlet cone.

(b) The internals on the ESP and T/R sets will be replaced; and

(c) The following new equipment will be installed:

(1) new 5-foot section on the discharge of the kiln;
(2) new kiln feed end housing;
(3) new kiln feed end seal;
(4) new high efficiency dedusting cyclone;
(5) new water spray tower; and
(6) new ESP inlet nozzle.

(d) The kiln ID fans will be modified / replaced with fans providing a higher static pressure and a lower volumetric flow. A higher static pressure fan is required for the additional pressure differential associated with the water spray tower. The system's volumetric flow requirement will be reduced due to the reduced amount of air infiltration from the new system. If the existing fan would be used the fan would be operated in the peak of the fan curve which could lead to operational problems or the fan searching for an operational point.

The equipment layout for the modified gas-cleaning control system can be seen in Figure 2.

After the described modifications are completed, the kiln exhaust gas will exit the kiln and travel through the kiln riser ducts to the inlet of the dedusting cyclone. The high efficiency cyclone will remove a certain percentage of dust in order to ensure proper operation of the conditioning towers and cyclones to the conditioning towers and reduce the dust loading to the ESPs. The partially dedusted kiln exhaust gas will exit the dedusting cyclones to the conditioning towers, which will reduce the gas temperature to 400 degrees Fahrenheit or less by the addition of water. The cooled and partially dedusted kiln exhaust gas will then be ducted to the ESP for final dedusting. The kiln ID fans draw the kiln exhaust gases through the various pollution control equipment and pressures the exhaust gas to the stack.

The OAM believes that the proposed modifications are exempt from federal PSD requirements. The modifications to the gas-cleaning control systems will result in a substantial reduction in particulate matter emissions. It is expected that emissions of all other regulated pollutants will not increase as a result of the proposed modifications because the modifications are not expected to increase the design capacity, efficiency, or actual clinker production of either kiln. As a result, there would be no debottlenecking and no increase in collateral emissions from emission units. Therefore, the PSD rules do not apply.

In any event, the U.S. EPA, in a guidance memorandum dated July 1, 1994, (John Seitz letter to Regional Directors) and the Indiana Air Pollution Control Board, by recent amendment to 326 IAC 2-2-1(o), have recognized that a pollution control project is exempt from PSD requirements unless it is found not to be environmentally beneficial or would result in a significant net emissions increase that would cause or contribute to a violation of any NAAQS or PSD increment. The U.S. EPA's 1994 guidance states that ESPs and high efficiency multi-clones are presumed, by their nature to be environmentally beneficial (see page 8). The 1994 guidance also recognizes that pollution control projects implemented to comply with a MACT requirement may be considered for exclusion from NSR (see page 6). While Lehigh is not seeking a pollution control project exclusion, these guidance references also support the granting of the requested

PSD non-applicability determination.

The OAM respectfully requests your applicability determination as to whether the proposed modifications to existing Kiln #1 and #2 control devices at Lehigh should be subject to PSD review. Hopefully the information contained in this letter will allow you to make a determination for this case and confirm the conclusions of the OAM. If you have any questions concerning this request or require additional information to make your determination, please contact Nisha Sizemore of my staff at 317-232-8356 or at 1-800-451-6027 (dial “0" and ask for ext 2-8356).

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

(1) Figures 1 and 2
(2) EPA’s guidance memorandum dated July 1, 1994

NLS
cc: Mr. Sam Portanova
Permits and Grants Section
USEPA Region V
AR-18J
77 W. Jackson Blvd.
Chicago, IL 60604-3507

Ms. Debbie Tolliver,
Lehigh Portland Cement Company
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OAM, Compliance Branch:
Joe Foyst

File: Permit Number 093-12897-00002